

**CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM  
STATEMENT OF INVESTMENT POLICY**

**FOR  
INTERNALLY MANAGED GLOBAL EQUITY INDEX FUNDS**

~~June 15, 2011~~ August 15, 2011

*This Policy is effective immediately upon adoption and supersedes all previous policies for Internally Managed Global Equity Index Funds.*

**I. PURPOSE**

The California Public Employees' Retirement System ("CalPERS") Total Fund Statement of Investment Policy, adopted by the CalPERS Investment Committee ("Committee"), sets forth CalPERS overarching investment purposes and objectives with respect to all its investment programs.

This document sets forth the investment policy ("Policy") for the Internally Managed Equity Index Funds - ("Funds" or "Portfolios"). Throughout this Policy, Funds and Portfolios are used interchangeably. The design of this Policy ensures that the investors, managers, consultants, and other participants selected by the CalPERS take prudent and careful action while managing the funds. Additionally, use of this Policy assures sufficient flexibility in managing investment risks and returns associated with the Funds.

**II. STRATEGIC OBJECTIVE**

Obtaining broad equity market exposure achieved by closely tracking the designated [benchmark](#) indices is the strategic objective of the Funds.

The Funds shall be managed to accomplish the following:

- A. Enhance CalPERS total return;
- B. [Hedge](#) against active (pre-retirement) liabilities; and,
- C. Provide diversification to CalPERS overall investment program.

**III. RESPONSIBILITIES**

- A. CalPERS Investment Staff ("Staff") is responsible for the following:
  - 1. All aspects of portfolio management including monitoring, analyzing, and evaluating performance relative to the appropriate benchmark.

2. Reporting internally to senior management concerning the implementation of this Policy. Staff reports will be prepared monthly to include, but not be limited to the following:
  - a. Current market value of the Portfolios;
  - b. Performance of the Portfolios versus the benchmarks as reported by the master [custodian](#); and
  - c. [Performance attribution](#) analysis that accredits return to its causes.
3. Reporting to the Committee as needed about the performance of the Funds. ~~The General Pension Consultant is responsible for reporting quarterly to the Committee, as described in section III.B.~~
4. Monitoring the implementation of, and compliance with, the Policy. Staff shall report concerns, problems, material changes, and all violations of Policies at the next Committee meeting, or sooner if deemed necessary. These reports shall include explanations of any violations and appropriate recommendations for corrective action.
5. Purchasing only securities that are outlined in this Policy.

- B. The General Pension Consultant (“Consultant”) is responsible for:

Monitoring, evaluating, and reporting quarterly, to the Committee, on the performance of the Funds relative to the benchmarks and Policy. The Consultant is responsible for reporting any non-compliance issues in accordance with its responsibilities under its contract with CalPERS.

#### IV. PERFORMANCE OBJECTIVE AND BENCHMARK

- A. Performance Objective

Achieving the return for the broad equity market is the performance objectives of the Funds. To accomplish this objective, using statistical models to approximate the return of the market, rather than replicate, may be more cost effective.

- B. Benchmark

The benchmark for the Internally Managed Global Equity Index Funds Policy is specified in the Benchmarks Policy.

Return deviations between the Portfolios and the designated benchmarks are expected to be random. ~~The benchmark for the Internally Managed Global Equity Index Funds Policy is specified in the Benchmark Modification and Benchmark Details Policy.~~ To account for the difference in the methodology for calculating the returns of the benchmarks and the Portfolios, the resulting return deviation may require an adjustment. CalPERS shall set parameters in the statistical models it employs in such a manner that tracking error shall be within the following thresholds:

1. Domestic Equity Index: Forecasted tracking error shall be within  $\pm$  50 basis points; realized returns should fall no more than 50 basis points below the benchmark over any 12 month period.
2. Domestic Microcap Index: Forecasted tracking error shall be within  $\pm$  300 basis points; realized returns should fall no more than 300 basis points below the benchmark over any 12 month period.
3. International Equity Index: Forecasted tracking error shall be within  $\pm$  25 basis points; realized returns should fall no more than 25 basis points below the benchmark over any 12 month period.
4. International Small/Microcap Index: Forecasted tracking error shall be within  $\pm$  300 basis points; realized returns should fall no more than 300 basis points below the benchmark over any 12 month period.
5. Emerging Markets Equity Index: Forecasted tracking error shall be within  $\pm$  300 basis points; realized returns should fall no more than 300 basis points below the benchmark over any 12 month period.
- ~~6.~~ Emerging Markets Small Cap Equity Index: Forecasted tracking error shall be within  $\pm$  500 basis points; realized returns should fall no more than 500 basis points below the benchmark over any 12 month period.
- ~~6.7.~~ Dynamic Completion Fund: Forecasted tracking error shall be within  $\pm$  150 basis points; realized returns should fall no more than 150 basis points below the benchmark over any 12 month period.
- ~~7.8.~~ Cash Equalization: Forecasted tracking error shall be within  $\pm$  300 basis points; realized returns should fall no more than 300 basis points below the benchmark over any 12 month period.

## V. INVESTMENT APPROACHES AND PARAMETERS

### A. Investment Approaches

The long-position (as opposed to futures) portfolios shall be managed in a structured fashion to achieve the stated performance objective. Structured investing can be achieved through replication or through an optimized, [sampled](#) approach to generate an actual Portfolio with risk characteristics closely resembling the benchmark. The actual implementation used for each Portfolio will be dependent on the specific characteristics of the applicable benchmark. A benchmark with a broader number of constituents and greater exposure to small capitalization securities will typically not be replicated due to liquidity and trading cost considerations.

Where an [optimization](#) approach is employed, a statistical risk model is used to define and decompose the Portfolio's risk exposures versus those of the benchmark. [Fundamental risk models](#) measure stock returns associated with industry and other fundamental factors such as domicile, [price/earnings](#) (P/E), yield, and [market capitalization](#). Such fundamental factors are referred to often as "[common factors](#)".

A common factor is an element of return that influences many securities and, hence, is a "common factor" in the returns on those securities. Based on the current Portfolio's exposure to country, industry, and common factors, the volatility of returns can be estimated. The information about volatility produced by a fundamental risk model can be used to evaluate Portfolio risk, decompose Portfolio risk according to common factor exposures, and evaluate how much of a Portfolio's return in a given period was due to each common factor exposure and how much was due to stock selection.

The cash equalization portfolio will hold an optimized basket of futures designed to achieve the desired equity exposure. The optimization will be run against the appropriate benchmark, with the resulting futures weights being approximately equal to those derived from the optimization process.

### B. [Specific Risk](#) Parameters

Specific risk parameters shall limit the return deviation of the Portfolio versus the benchmark. Use of a number of different models shall ensure that the risk parameters are within an acceptable tolerance level to achieve the performance objectives. Since CalPERS may add or eliminate models, the specific risk parameters for each model are detailed in the Procedures Manuals.

Implementation of this program shall comply at all times with CalPERS investment policies including, but not limited to, the following:

1. Emerging Equity Markets Principles;
2. Statement of Investment Policy: Development of Derivatives – Strategies; and
3. Proxy Voting Policies.

C. Restrictions

The Portfolio may not purchase the securities of primary tobacco companies as identified by the Investor Responsibility Research Center Tobacco Company List.

D. Permissible Securities

1. Equity and associated securities of global publicly traded companies.
2. The Portfolio may hold securities not represented in the designated benchmark. Generally, these holdings in aggregate shall be limited to less than 3% of the Portfolio's total market value. Such holdings are justified by the following reasons:
  - a. Liquidity constraints or excessive transaction costs, such as those required to sell certain securities obtained from [corporate actions](#) or from past benchmark [reconstitutions](#); or
  - b. Are held as a proxy for a benchmark asset that is illiquid or unavailable; or
  - c. Expectation of inclusion in the benchmark at the next reconstitution.
3. Derivatives, as detailed in Section VII.

E. Corporate Actions

Corporate actions (e.g., [tender offers](#), [mergers](#), [Dutch-auctions](#), or [spin-offs](#)) shall be handled on a case-by-case basis.

Companies which offer discount [Dividend Reinvestment Programs](#) (DRIP) and similar programs will be analyzed to determine if return enhancement can be added by participating in such programs.

F. [Rebalancing](#) and Trading Activity

The rebalance decision for any Portfolio is primarily based upon analysis of risk and potential performance deviation from the benchmark. Portfolio rebalancing shall be performed as necessary to maintain the Portfolio's risk characteristics in accordance with those of the benchmark. At a minimum, the Portfolio shall be reviewed monthly and at reconstitutions. The Portfolios will be analyzed to reduce [systematic](#) and [nonsystematic risk](#) while minimizing transaction costs.

A variety of trading techniques and liquidity sources shall be utilized to obtain best execution of the approved trade list.

Transaction cost analysis shall be performed and evaluated on a quarterly basis for monitoring trading efficiency as compared to that of a like universe. An outside vendor may prepare this analysis.

G. Strategy Monitoring

A monthly reporting package shall be prepared for each strategy by the Internal Equity staff assigned to manage the strategy. The reports to be included shall be those needed and appropriate to allow monitoring by more senior Internal Equity staff of the management process, risk acceptance and performance of each strategy. This reporting package may vary depending on the management process, benchmark and performance objective unique to each strategy and shall be described in the procedures manual.

The Consultant shall include strategy level information in their quarterly report to the Committee.

## VI. CALCULATIONS AND COMPUTATIONS

Investors, managers, consultants, and other participants selected by CalPERS shall make all calculations and computations on a market value basis as recorded by CalPERS Custodian.

## VII. [DERIVATIVES](#) AND [LEVERAGE](#) POLICY

A. Strategies

The Fund may utilize financial [futures](#), [equity swaps](#) and [options](#) in the Portfolio for the following purposes:

1. Permitting the investment of dividends received;

2. Equitizing cash and dividends receivable;
3. Allowing adjustment of the Portfolio's risk characteristics in the most cost effective manner available;
4. Facilitating investment of cash flows related to contributions, withdrawals, or asset allocation compliance.

B. Justification

Justification for the above mentioned strategies includes the following:

1. Reducing transaction costs in comparison with the purchase of underlying securities;
2. Equitizing non-spendable cash exposures (e.g. dividend accruals) to get a highly correlated return on that component of the Portfolio;
3. Providing the ability to alter risk characteristics versus the benchmark without disrupting the underlying Portfolio or unnecessarily increasing turnover; and
4. Obtaining matched returns between the benchmark and the Portfolio through investment in custom equity swaps and currency forwards.

C. Restrictions

Restrictions on the above mentioned strategies include the following:

1. Writing [uncovered calls](#) is prohibited;
2. Leveraging is prohibited. The use of futures contracts as specified in this Policy will not constitute leverage;
3. With the exception of equity swaps and currency forwards, trading non-exchange traded derivatives is prohibited;
4. [Speculating](#) is prohibited;
5. Use of non-[CFTC](#) approved futures contracts is prohibited; and
6. Portfolio specific position limits will be established and monitored as detailed in the applicable procedures manual.

D. Permissible Derivatives

Derivatives utilized in the index Portfolio may include, but are not limited to the following:

1. Index futures;
2. Style futures;
3. Index options;
4. Currency forwards;
5. Equity swaps;
6. [Exchange Traded Funds](#) (ETF); and
7. [Closed End Funds](#).

E. Futures Commission Merchants (FCM)

Futures Commission Merchants are selected with the following broad range of criteria:

1. Low cost clearing and executing charges;
2. Securely capitalized firm;
3. Clear account statements and efficient reconciliation;
4. Responsive personnel;
5. Discrete and efficient operation;
6. Personal interview; and
7. Reference checks.

## VIII. GLOSSARY OF TERMS

Key words used in this policy are defined in CalPERS Master Glossary of Terms.



Domestic Equity Index Fund – Internally Managed

Adopted by the Investment Committee:	September 16, 1996
Revised by the Policy Subcommittee:	May 13, 1999
Approved by the Investment Committee:	August 16, 1999
Revised by the Policy Subcommittee:	December 8, 2000
Approved by the Investment Committee:	March 19, 2001

Name Change to Equity Index Funds – Internally Managed

Revised by the Policy Subcommittee:	March 11, 2005
Approved by the Investment Committee:	April 18, 2005
Revised by the Policy Subcommittee:	June 10, 2005
Approved by the Investment Committee:	August 15, 2005

Name Change to Internally Managed Global Equity Index Funds  
(incorporates DCF policy)

Revised by the Policy Subcommittee:	March 17, 2008
Approved by the Investment Committee:	April 21, 2008
Revised by the Policy Subcommittee:	April 21, 2008
Approved by the Investment Committee:	May 12, 2008
Revised by the Policy Subcommittee:	December 15, 2008
Approved by the Investment Committee:	February 17, 2009
Administrative changes made due to Policy Review Project:	June 16, 2009
Admin changes due to adoption of Benchmark Policy:	November 18, 2009
Revised by the Policy Subcommittee:	April 19, 2010
Approved by the Investment Committee:	May 17, 2010
Revised by the Policy Subcommittee:	June 15, 2011
<u>Approved by the Investment Committee</u>	<u>August 15, 2011</u>

### **Benchmark**

A set of securities with associated weights that provides a passive representation of a market segment. A benchmark's return is often used as a comparative measure of a manager's performance results in an active portfolio.

### **~~CalPERS Custom Wilshire 2500 Index~~**

~~The Wilshire 2500 Index, excluding tobacco stocks, and with dividends reinvested. The standard Wilshire 2500 comprises the top 2500 securities of the Wilshire 5000 Index, including Real Estate Investment Trusts and tobacco stocks, based on market capitalization, and is reconstituted annually. The Wilshire 5000 is an index that measures the performance of all U.S. headquartered equity securities with readily available price data.~~

### **~~CalPERS Custom Wilshire Microcap Index~~**

~~The benchmark is based on the Wilshire 5000 index excluding tobacco stocks, less the CalPERS Custom Wilshire 2500 Index. This benchmark uses market capitalization and has annual reconstitution with dividends reinvested. Exposure to the universe of the smallest U.S. securities is obtained with this benchmark.~~

### **~~Capitalization Weighted~~**

~~A weighting method based on the equity market capitalization of a stock. Market capitalization is calculated by multiplying the total outstanding shares of a stock by its price per share.~~

### **Closed-end Funds**

These are mutual funds professionally managed by an investment company with a finite number of shares issued. Closed end funds may be considered to be a derivative instrument as a component of their unit valuation is derived from the underlying value of the investments held by the fund.

### **Commodities and Futures Trading Commission (CFTC)**

An agency of the U.S. federal government that regulates the U.S. commodity futures and options markets. The CFTC is responsible for insuring market integrity and protecting market participants against manipulation, abusive trading practices, and fraud.

### **Common Factor**

An element of return that influences many securities and, hence, is a "common factor" in the returns on those securities. By virtue of their common influence on many stocks, common factors contribute to market return as well as residual returns of the stocks that they influence most. Some common factors for

domestic equity are capitalization, beta, price/earnings, price/book, interest sensitivity, and yield.

### **Corporate Actions**

An action taken by a company that causes a material change in structure including, but not limited to, name, price, shares, capitalization, or other such events. Typical corporate actions include tender offers, mergers, Dutch auctions, and spin-offs.

### **Custodian**

A bank or other financial institution that provides custody of stock certificates and other assets of an institutional investor.

### **Derivative**

An instrument whose value is based on the performance of an underlying financial asset, index, or other investment. Classes of derivatives include futures contracts, options, currency forward contracts, swaps, and options on futures.

### **Dividend Reinvestment Program**

A plan offered by a corporation in which shareholders may purchase additional shares with cash dividends on the dividend payment date. Often times the additional shares are sold at a discount and are commission free.

### **Dutch-Auction**

A system in which the price of an item is gradually lowered until it meets a responsive bid and is sold.

### **Dynamic Completion Fund**

A custom portfolio designed to control the capitalization or style misfit present in a plan sponsor's investment program.

### **Earnings/Price Ratio**

The relationship of earnings per share to current stock price. The stock's trailing 12 months of reported earnings is often used as the earnings per share figure.

### **Equity Swaps**

An agreement between two parties dictating a swap with payments on one or both sides, linked to the performance of equities or an equity index.

### **Exchange Traded Fund**

An exchange traded fund (ETF) is an investment vehicle that is a hybrid between a stock and a mutual fund. It is built like a mutual fund, being a pool of investment assets such as stocks, bonds, or commodities. Like a stock, however, they are listed on exchanges and traded throughout the day. Most ETF's track an index, though more complex ETF's such as inverse, leveraged, and active ETF's do exist.

An exchange-traded fund (ETF) is an investment company that is legally classified as an open-end company or a Unit Investment Trusts. An ETF is not classified as a mutual fund by the Securities and Exchange Commission because of limited redeemability. A typical ETF is similar to an index fund, and will invest in either all of the securities of a selected index or a representative sample of the securities included in the index. An ETF may be considered to be a derivative instrument as a component of their unit valuation is derived from the underlying value of the investments held by the fund.

### **Forecasted Tracking Error**

The expected or ex ante annualized standard deviation of the difference between the return, defined as the average of the model estimates of at least two providers.

### **Fundamental Risk Model**

A model used to predict the risks of individual stocks using fundamental and technical information. A covariance matrix is constructed from the factor's standard deviations and the correlations between one another. This covariance matrix can be used to predict the risk characteristics of a portfolio.

### **Futures**

Exchange-traded contracts to buy or sell a standard quantity of a given instrument, at an agreed price, and date. A future differs from an option in that both parties are obliged to abide by the transaction. Futures are traded on a range of underlying instruments including commodities, bonds, currencies, and stock indices.

### **Hedge (Hedging)**

A strategy used to offset investment risk. A perfect hedge is one eliminating the possibility of future gain or loss.

### **Leverage**

A condition where a portfolio's market obligation may exceed the market-value-adjusted capital commitment by the amount of borrowed capital (debt).

### **Market Capitalization**

A stock's current market price multiplied by the current common shares outstanding.

### **Merger**

The combination of two or more companies. Strictly speaking, only combinations in which one of the companies survives as a legal entity are called mergers.

### **Nonsystematic Risk**

That part of a total return that cannot be explained by a single- or multi-factor

model of returns. Such components of return can be diversified away in a sufficiently large and well-diversified portfolio.

**Optimization**

The best solution among all solutions available for consideration. Constraints on the investment problem limit the region of solutions that are considered and the objective function for the problem by capturing the investor's goals correctly, providing a criterion for comparing solutions to find the better ones. The optimal solution is the solution among those admissible for consideration that has the highest value of the objective function.

**Option**

Contracts that give the purchaser the right, but not the obligation, to buy or sell an underlying instrument at a certain price (the exercise or strike price) on or before an agreed date (the exercise period). For this right, the purchaser pays a premium to the seller. The seller (writer) of an option has a duty to buy or sell at the strike price, should the purchaser exercise his right.

**Performance Attribution**

The process of attributing portfolio returns to causes. It decomposes past performance into separate components or factors contained within a multi-factor model.

**Rebalancing**

The process of modeling a portfolio through an optimizer or other portfolio construction method to generate a trade list that better aligns a portfolio with its investment objective.

**Reconstitution**

The periodic reformulation of a benchmark index which may entail the addition or deletion of securities along with changes to the parameters which determine the relative weight of included assets.

**Return Deviation**

The difference between the total return of a portfolio and the total return of the benchmark index.

**Sampling**

A method of indexation whereby a representative sample of the index constituents, rather than every share in the index, are purchased.

**Specific Risk**

The component of total risk that is unique or idiosyncratic to an individual security.

**Speculation**

Assumption of risk in anticipation of gain but recognizing a higher than average possibility of loss.

**Spin Offs**

Companies which are created by separation from another company and begin to trade publicly on their own.

**Systematic Risk**

That portion of total risk that stems from exposure to the market in general and cannot be eliminated by diversification.

**Tender Offer**

A public offer to buy all or a portion of a specific security for cash, other securities, or both.

**Tracking Error**

The annualized standard deviation of the difference between the total return of the portfolio and the total return of the benchmark. The term tracking error is frequently used to describe return deviation, the total return of a portfolio, minus the total return of a benchmark index.

**Uncovered Calls**

A strategy in which an investor writes (sells) call options on the open market without owning the underlying security. This stands in contrast to a covered call strategy, where the investor owns the security shares that are eligible to be sold under the options contract.